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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,567	01/30/2004	Noriaki Fujii	275412002000	8530

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MORRISON & FOERSTER LLP  
755 PAGE MILL RD  
PALO ALTO, CA 94304-1018

EXAMINER
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COLEMAN, VANESSA V

ART UNIT	PAPER NUMBER
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2627

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09/19/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/769,567

**Applicant(s)**

FUJII, NORIAKI

**Examiner**

Vanessa (Brandi) Coleman

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 01 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Ogata et al., US Patent 6,614,720 (hereinafter "Ogata").

For Claim 1, Ogata discloses:

An optical pick-up apparatus (optical pickup device; see Figs. 1 and 9) that records information in an optical recording medium (optical disk 7; see Figs. 1 and 9) and/or reproduces information from the optical recording medium by means of light, comprising: a light source for emitting light (semiconductor laser 1; see Figs. 1 and 9); a diffraction grating (diffraction element 2, specifically diffraction grating 20; see Figs. 1, 2B, 9 and 10B) for diffracting light emitted from the light source, the diffraction grating being formed line-symmetrically with respect to a virtual line perpendicular to a radius direction of the optical recording medium the optical recording medium in an attached state and perpendicular to the light emitted from the light source, and divided into a plurality of diffraction regions formed in such a manner that each has an inclination

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angle with respect to the virtual line and grating cycles of adjacent diffraction regions have a phase difference of 180 degrees with each other (referencing Figs. 2B and 10B, the diffraction grating 20 features linear grating patterns extending horizontally in the y-direction, such that any virtual line formed vertically through the grating extending in the x-direction has an inclination angle with each individual grating pattern. Because each grating pattern is parallel to each other, a phase difference of 180 degrees between grating cycles of adjacent regions is understood. Diffraction grating 20 is perpendicular to the light emitted from the light source as shown in Fig. 1); light collecting means (objective lens 6; see Figs 1 and 9) for collecting light emitted from the light source onto the optical recording medium; a light diverging element (diffraction element 2, specifically diffraction grating 21, see Figs 1, 2A, 9 and 10A) for diverging reflection light reflected on the optical recording medium; and a light receiving element (photodetector 8; see Figs. 1, 2C, 9 and 10C) for receiving the reflection light diverged by the light diverging element, wherein the diffraction grating is formed on a rectangular substrate made of a light-transmitting material (see Figs. 1, 2B, 9 and 10B).

For Claim 2, Ogata discloses:

The optical pick-up apparatus, wherein the diffraction grating (diffraction grating 20) is disposed between the light source and the light diverging element (see Figs 1 and 9).

For Claim 3, Ogata discloses:

The optical pick-up apparatus, wherein the diffraction grating (diffraction grating 20) is formed on the substrate on a surface facing the light source (surface 2a; see Figs. 1 and 9), and the light diverging element (diffraction grating 21) is formed on the substrate on a surface facing the light collecting means (surface 2b; see Figs. 1 and 9).

For Claim 4, Ogata discloses:

The optical pick-up apparatus, wherein the light source (semiconductor laser 1) is formed integrally with the substrate on which the diffraction grating and the light diverging element are formed (see Figs. 1 and 9).

For Claim 5, Ogata discloses:

The optical pick-up apparatus, wherein the light source (semiconductor laser 1) is formed in such a manner that an outer shape thereof is shaped like a rectangular parallelepiped, and that a width  $w$ , which is a dimension in a direction parallel to a surface of the optical recording medium, is larger than a thickness  $t$ , which is a dimension in a direction perpendicular to the surface of the optical recording medium ( $w > t$ ) (referencing Figs. 1 and 9, and particularly Fig. 14, the semiconductor laser has the shape of a rectangular parallelepiped, whose width in the  $y$  direction parallel to the surface of optical disk 7 is larger than a thickness in the  $x$ -direction perpendicular to the surface of optical disk 7).

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Nomura et al., US Patent 6,342,976.

For Claim 6, Nomura discloses:

An optical pick-up apparatus (optical pickup apparatus; see Col. 3 lines 46-67, Col. 4 lines 1-18) that records information in an optical recording medium and/or reproduces information from the optical recording medium by means of light, comprising: a light source for emitting light (semiconductor lasers 1B or 1C; see Fig. 1); a diffraction grating (diffraction grating region 12; see Fig. 2) for diffracting light emitted from the light source, the diffraction grating being formed line-symmetrically with respect to a virtual line perpendicular to a radius direction of the optical recording medium the optical recording medium in an attached state and perpendicular to the light emitted from the light source, and divided into a plurality of diffraction regions formed in such a manner that each has an inclination angle with respect to the virtual line and grating cycles of adjacent diffraction regions have a phase difference of 180 degrees with each

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other (referencing Fig.2, it is noted that the diffracting portion 12 has line-symmetric grating patterns, such that any virtual line formed vertically through the grating in either a vertical or horizontal direction with respect to the surface of the region has an inclination angle with each individual grating pattern. Because each grating pattern is parallel to each other, a phase difference of 180 degrees between grating cycles of adjacent regions is understood. The diffracting portion 12 is formed on the surface of objective lens 5, and is thereby perpendicular to the light emitted from the light source as shown in Fig. 1); light collecting means (luminous flux diameter variable type objective lens 5; see Fig. 1) for collecting light emitted from the light source onto the optical recording medium; a light diverging element (half mirror 3; see Fig. 1) for diverging reflection light reflected on the optical recording medium; and a light receiving element (four-part photodiode 7; see Fig. 1) for receiving the reflection light diverged by the light diverging element, wherein the diffraction grating is formed integrally with the light collecting means.

5. Applicant's arguments filed June 1, 2007 have been fully considered but they are not persuasive. Regarding Claim 1, applicant argued that Ogata does not specifically teach the claimed phase difference of 180 degrees in the diffraction grating. The examiner contends that the claimed feature is taught in the illustrations of the gratings as cited, where a phase difference is interpreted as a displacement or shift in either direction along the X-axis. Regarding Claim 6, applicant argued that Nomura fails to teach or suggest the claimed diffraction grating. The examiner contends that the

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claimed diffraction grating is in fact suggested by Nomura, drawing attention to the rationale provided in the rejection of Claim 6.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanessa (Brandi) Coleman whose telephone number is (571) 272-9081. The examiner can normally be reached on Mon-Thurs 8:30-6; 1st Fri off, 2nd Fri 8:30-5.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vanessa (Brandi) Coleman  
Art Unit 2627

VC

  
WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER